Eastern Oregon Ecosystem Health and Restoration "Model Projects"

These projects are ideal examples of our commitment to community involvement and active management. Each one represents a larger series of watershed-level activities that address the importance of the overall health of our forests and streams.

Introduction

Twenty-nine "best examples" are presented in this years 1998-1999 Eastern Oregon Ecosystem Health and Restoration Model Projects. The twenty-nine projects were selected by the State of Oregon in collaboration with the Forest Service (USFS) and the Bureau of Land Management (BLM). These are called model projects because they best demonstrate adherence to Governor Kitzhaber's Eastside Forest Ecosystem Restoration Strategy.

In 1995, Governor Kitzhaber's Forest Health Scientific Panel conducted a study documenting forest and rangeland health problems in eastern Oregon. This report echoed similar findings documented by the Forest Service, BLM, and other academic studies. As a result, in 1997 the Governor convened the Citizen's Eastside Forest Advisory Panel to assist in developing a policy to address forest health problems. The policy resulted in developing a common sense strategy to aggressively treat unhealthy forest and rangelands with public support, called the 11-Point Eastside Ecosystem Health Strategy.

This marks the second year that the State of Oregon and the federal land management agencies, USFS and BLM, have collaboratively selected the model projects. In 1997, all of the projects, except for one, were on Forest Service lands (1997 projects are listed in the appendix). This year, the BLM has submitted five model projects, showing examples of sound forest and range management, and the Sun Pass State Forest has contributed one. In the year 2000, there is expected to be several private land model projects, selected in eastern Oregon, to be highlighted along with the public land projects.

For 1998-1999, the focus has been on public land projects that demonstrate strong collaboration between all levels of government, private landowners, and citizens. Over the past few years we have learned that managing larger landscapes, for example at the watershed scale, is critical to the integrated management of entire ecosystems.

It is our hope, as public land managers, that all land managers—federal, state, and private—will learn from the examples that have been put forward. We remain committed to addressing critical ecosystem restoration needs and we encourage all citizens who value the forests of eastern Oregon to join us in these efforts.

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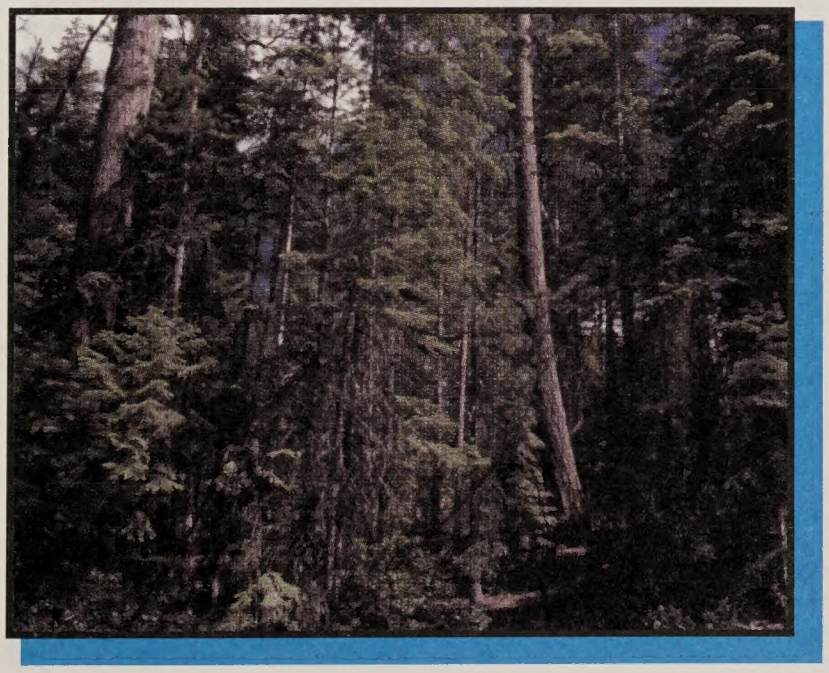
Deschutes National Forest

Seven Buttes

The Seven Buttes projects began in 1998 and will be completed through 2001. An Environmental Analysis, completed in 1996, covered five subwatersheds and over 100,000 acres. Two projects resulted from this analysis, which are the Seven Buttes Natural Fuels Project and the Flow Timber Sale. Both projects use fire and thinning to accomplish the objectives of ecosystem health.

The Seven Buttes Natural Fuels project is located in an area of high risk for large-scale disturbance, specifically from insect defoliation and fire. High hazard areas in the vicinity of small housing developments were identified as a priority for treatment. Treatments include prescribed burning, mechanical treatment by mowing, and small tree thinning, with an emphasis on burning. The Flow Timber Sale, which was originally designed as a commercial timber harvest, used a post and pole sale to use the trees that were removed in the pre-commercial thinning.

- Commercial size post and pole materials were byproducts of restoration.
- Fire risk reduced due to the removal of high-hazard fuels on over 1,400 acres.
- Over time, large tree structure will be enhanced.
- Will maintain and enhance habitat for the spotted owl.



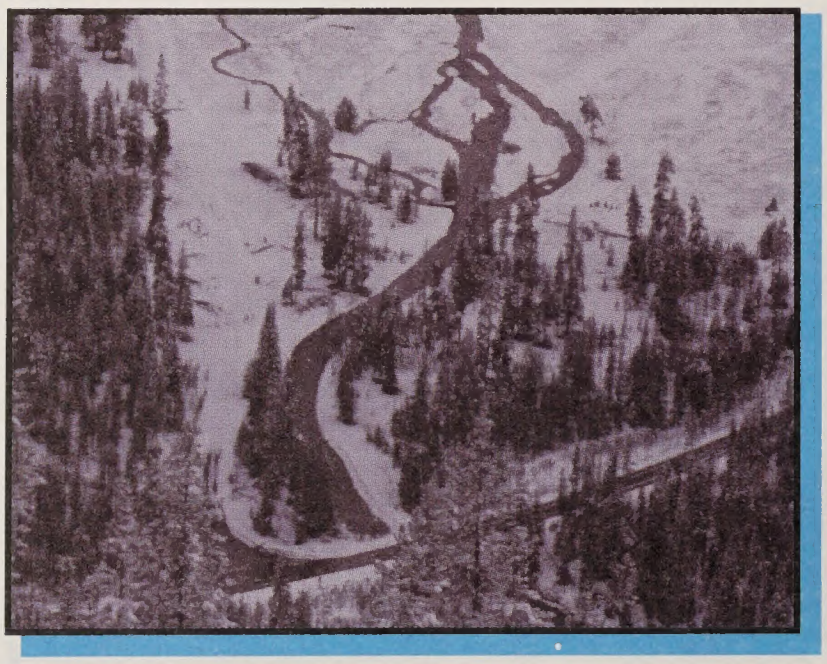
Before- dense crowded forest conditions vulnerable to insects and wildfire.

After- More open conditions reduced risk of fire and provided wildlife habitat.

Soda Creek

The High Cascade Mountain Soda Creek, once a stream teeming with fish and vegetation, had been changed by both natural and human caused disturbances and had become a straight, sterile stream. Sparks Meadow, which Soda Creek flows into, was altered at the turn of the century by irrigation ditches, which ranchers dug to drain the meadow and provide an area for cattle to graze. In 1966, a natural glacial lake dam above the stream broke, sending a wall of water, mud and debris into the valley. This raised the water level so that it flowed over the Cascade Lakes Highway, a national scenic byway. To save the highway, a 900 foot long, 36 foot wide ditch was bulldozed to move water back into the meadow, which changed the course of Soda Creek. Soda Creek had no clear channel and added a new channel each year, making it impossible to establish vegetation or fish habitat. With community participation and the help of science and hard work, Soda Creek has been restored to its natural stream characteristics.

- Restoration efforts took into consideration slope, waterflow and sediment type.
- The restoration project began in May 1997, and affects 10% of the watershed.
- A new meandering channel with pools was dug to replace the shallow straight channel.
- Monitoring is being done by the Forest Service and by the Mountain View High School in Bend.



Before- Soda Creek flooded easily and did not support fish.

After- Improved riparian function allowed vegetation and fish to become reestablished.

Noxious Weed Prevention

A cornerstone of the Deschutes National Forest's approach to managing noxious weeds is prevention. Noxious weeds are aggressive, non-native plants, that endanger native plants, wildlife and ecosystems as they compete for water, nutrients, and light. Whole ecosystems are changed by noxious weeds. The solution to weed prevention and control is active community involvement. The Noxious Weed Prevention project has in place an aggressive education program which has successfully increased awareness and concern. Collaborative partnerships have been formed and local citizens, state and federal agencies, and nonprofit organizations are working together to increase local awareness of the weed problem and to help control their spread and incidence.

- Collaborators include: The Oregon Watershed Enhancement Board, Deschutes County Watershed Council, ODFW, Deschutes Soil and Water Conservation Service, Native Plant Society and Woodside Range Homeowner's Association.

- Noxious weed management incorporated in to the "Adopt-A-Road" program.

- Development of demonstration areas established for controlling weeds through collaborative efforts with private and public landowners.

- Newspaper insert that educates and provides solutions to apply.

- Aggressive education approach with key community groups, forums and agencies.

Before- Noxious weeds quickly alter the ecosystems function.

After- In addition to native plants, ecosystems are protected through proactive management.

Sisters/Why-chus Watershed Analysis and the Highway 20 Project

A Watershed Analysis was conducted for the Sisters/Why-chus Watershed and Highway 20 project, covering 177,000 acres of scenic country surrounding the town of Sisters, Oregon. The Deschutes National Forest staff used public values and opinions from user surveys and the Sisters Watershed History Festival to understand what would be ecologically and socially acceptable along the Federal Scenic Byway on State Highway 20 and the adjacent subdivisions. The watershed has a long human history and growing concerns for the future. Native Americans called its largest stream, Why-chus, "a place to cross the water." Visitors have been a strong part of the economy since the 1880's, which still remains true today. The project objectives were: restoration of pine forest ecosystems with small tree thinning and brush mowing coupled with prescribed fire; reducing the risk of high intensity wildfires; improving public and firefighter safety; and improving scenic views along the scenic byway.

- Collaborators include:
  The Federal Highways Administration, Black Butte Ranch Homeowners Association and Fire Department, and Oregon Department of Forestry.

- Created 92 jobs through contracts for work to be completed.

- Improved 1242 acres of riparian habitat along Indian Ford Creek.

- Enhanced and restored 2300 acres of aspen stands.

- Improved 9000 acres of forests with scenery, historic big tree character, and reduced fire risk.

- The Deschutes County Watershed Council Action Plan for Why-chus Creek was put together by a local working group.

- Community volunteers contributed $17,000 worth of inkind services and provided a strong understanding of the social ecology of the watershed.

Before- Forest along Hwy 20 at risk from wildfire, managers turn to the public for advise.

After- Social values with long term restoration resulted in common goals and actions.

Fremont National Forest

Upper Chewaucan Prescribed Burn

The Upper Chewaucan Watershed Council started a watershed assessment process to help members implement ecologically sound and collaborative projects. These projects promote multiple use management and protect water and fish habitat quality, while providing for sustainable forest and grassland ecosystems. One example of a project that resulted from the assessment was a controlled burn. The burn was planned across private and public land boundaries, and covered about 18,000 acres. The Forest Service is in the process of tiering to the watershed analysis and is looking at possible timber sales, road closures and decommissioning, riparian improvements, and allotment management plans for the federal lands.

- 20 acres of thinned juniper.
- Increased forage production for ranching industry and private members.
- Reduced fire risk over 18,000 acres within the project area.
- Aspen stands are resprouting in thinned and burned sites.
- Reduced erosion through reestablishing grasses and forbs.
- Improved water quality through decreased sedimentation.
- Improved habitat for Chewaucan Basin red band trout.
- The council received a grant from the Oregon Governor's Watershed Enhancement Board, the Fremont National Forest funds, and the Forest Service Chief to accomplish watershed restoration activities and complete the watershed assessment.

Before- The Upper Chewaucan Watershed Council assessed habitat conditions.

After- Protected water and fish quality through proactive thinning, prescribed fire, and road obliteration.

Recomb Thinning

The purpose of this project was to reduce the number of trees within the area to both maintain and develop late and old forest structures. A second objective was to re-establish native grasses with and along the edges of dry meadows. This project is a very good example of what the Fremont is trying to do for many of their watersheds. Project managers were not initially able to sell the timber to interested buyers, because the restoration objectives did not clearly identify a breakpoint for using a timber sale as the tool for accomplishing restoration goals. When a large amount of trees were blown down in high winds the project became economically feasible as forest staff quickly included the new disturbance effects into their analysis and subsequent restoration actions. Where possible, projects are designed so that they enhance or serve socioeconomic needs of the community. Post sale monitoring will include an analysis of where to reintroduce fire. In some cases, when pre-commercial thinning is being considered in the post sale work, fire is considered the best tool for completing this work.

Malheur National Forest

Clear Creek

Portions of the Upper Middle Fork of the John Day River Watershed can no longer support a healthy forest ecosystem due to fire suppression, timber harvest and road building. The Malheur National Forest is using a number of tools to begin the process of restoring ecosystem health within the Clear Creek Analysis Area. Emerging scientific findings from the Interior Columbia Basin Ecosystem Management Project (ICBEMP) are being used to design the project. On the ground treatments, which began in 1998, focus on the thinning of understory stands to promote resilient late and old structural stand conditions.

- Approximately 16 MMBF of sawlogs and fiber will provide for contracting and employment opportunities.

- Six hundred acres of forest infected with Armillaria root disease will be treated using a combination of harvest, thinning, prescribed fire, and planting methods.

- Prescribed fire will be used on 2,100 acres to reduce fuels and re-establish desired under and middle story forest conditions.

- The project includes a monitoring plan, use of low impact harvest equipment, and the decommissioning of 4.8 miles of road within riparian areas.

- Road densities reduced from 4.7 miles per square mile to 2.9 miles.

- Improved wildlife habitat with 30% of area identified as high quality cover/connectivity corridors.

Pete Thinning

The Pete project focused on forest areas with a high risk of epidemic insect populations due to crowded forest conditions. Another focus of the project was to promote the growth of larger trees through thinning and fire in an effort to move stands toward an older structure type. All large trees over 21 inches in diameter were retained, thus providing future wildlife habitat for cavity nesters and for goshawks, redtailed hawks, and eagles. Two concurrent projects within the watershed integrate prescribed fire and road management activities.

The Pete project is an example of proactive forest management and of cooperation between the Malheur National Forest, Tribes and local community. The Forest also worked closely with local interested parties in designing the project, including potential timber purchasers to ensure sale specifications that would make the harvest of small diameter trees more feasible.

- Collaborators include: Blue Mountains Elk Initiative, Rocky Mountain Elk Foundation, and adjacent landowners.

- Over 3000 acres of commercial and pre-commercial thinning of understory trees produced 4.5 MMBF of small diameter timber for local markets.

- Prescribed burning will be used over much of the area to help restore the forest to historic conditions.

- The health of aspen stands will be improved through thinning of competing confers, closure of roads, and restrictions on equipment operations to protect soil characteristics.

- 21 miles of dirt road closed or decommissioned to improve water quality and wildlife habitat.

- Two aspen clumps protected from competing trees.

Summit Fire Monitoring

The Summit Fire Monitoring project is an experimental area in which post-fire treatments are being compared on managed and non-managed forests. Monitoring the post-fire recovery effort is critical to learning about the effects of treatments. Future fire recovery efforts will benefit from the application of knowledge gained through evaluating restoration actions.

The Summit Wildfire burned in August of 1996. The proposed post-fire recovery effort, which included extensive timber harvest, was very controversial. The project was appealed and required a supplemental Environmental Impact Statement (EIS) to address fish and riparian habitat issues. Quality monitoring and research will address conflicting science in passive and active management strategies.

- Areas to be monitored include fisheries, wildlife and riparian habitat, sedimentation, road closures, fuel loading, survival rates of scorched trees, and protection of cultural resources.

- Monitoring forums are scheduled to ensure common understanding of information gathered to answer over 16 monitoring questions.

Mt. Hood National Forest

Diablo Timber Sale

Commercial and pre-commercial thinning, along with prescribed burning, are the principle tools in this effort to move the area toward a desired condition of open park-like forest. A past history of fire suppression and forest fragmentation put the Diablo Planning Area at a high risk for epidemic insect defoliation and large scale wildfire. An integrated restoration strategy was used to thin stands and promote the growth of vigorous, large trees. These forests are home to elk and deer herds, as well as habitat for the Northern Spotted Owl and various species of trout.

- Approximately 14.4 MMBF of commercial timber was made available from the thinnings.
- Thinning involved small diameter material, and low impact mechanized harvesting to make processing more cost effective.
- Once thinnings are complete, prescribed fire and road closures will be used as a way to assist the long term restoration effort.
- Protected larger trees and snags to create species habitat.

Ochoco National Forest

Bridge Creek Noxious Weed Project

This project focused on reducing the number of noxious and invasive weeds in the Bridge Creek Watershed. It responds to priorities identified in a Watershed Assessment and by the Bridge Creek Watershed Council. Initial control treatments consisted of biological agents released on known weed infestations. These biological control agents were approved through cooperative agreements with the Counties, and were combined with manual and chemical control treatments along roads and in old agricultural fields. Continued monitoring of the effects of the project is important. An integrated, proactive approach to managing and controlling noxious weeds included education and cooperative planning. The Bridge Creek Watershed Council placed a high priority on managing noxious weeds and emphasized the importance of this activity to its members.

- Collaborators include: Ochoco National Forest, BLM Prineville District, and the Bridge Creek Watershed Council.

- Developing and testing a digital imagery method for identifying and locating noxious weeds.

- Biological and manual control efforts will be continued with a complementing set of chemical control efforts.

- Have conducted training and awareness sessions for private landowners, public resource managers and staff to create a knowledge base from which to implement and support the efforts of the project.

Mill and McKay Creek Restoration Projects

The Mill and McKay Creeks in the Ochoco National Forest have very high recreational use and have received broad local support for restoration work. Following the flood of 1964, both creeks were channelized, which removed many of their natural features. Most of the sediment in the lower portions of these streams originates from the channelized portions. The restoration projects will restore portions of the streams, so they more closely resemble their natural flow regimes, by using the Rosgen techniques to maintain the stream bed level and reduce bank erosion.

- Collaborators include: Adjacent private land owners, the BLM, the Central Oregon Youth Conservation Corps, and the Confederated Tribes of the Warm Springs.

Mill Creek restored to its original floodplain.

Lone Pine Basin Prescribed Burning

The interruption of the fire cycle has allowed junipers to dominate large areas of the Crooked River National Grasslands. The result is a reduction in water available to other plants and an increase in bare ground areas, curbing the amount of forage available for livestock and wildlife. The Lone Pine Basin Prescribed Burn is a multi-year effort.

- Will reduce the number of younger juniper by 60 percent.
- Improves the amount of forage for cattle.
- Uses fire to create a mosaic of vegetation across half of the project area.
- Maintains desired vegetation such as Wheat Grass and Needle Grass.

Before- Pine Ridge without fire, September 1998.

After- Pine Ridge, August 1999, reintroduction of fire killed young juniper and native plants were reestablished.

Umatilla National Forest

Phillips Creek Road Obliteration

High road densities have been a concern in the Blue Mountains of the Umatilla National Forest because they allow big game harassment and can also be a source of sediment into water sources. As part of the Forest Service's land exchange strategy to reduce in holdings and create environmentally appropriate road networks, the Umatilla National Forest removed one bridge and four miles of road. Over 30 acres was reseeded and replanted.

This reduced sediment into the stream, provide for future shade, and contributed to future stream complexity. This activity is part of others to improve habitat for the Snake River steelhead, which is listed as threatened in the Phillips Creek drainage.

- Collaboration with The Grande Ronde Model Watershed Program, provided technical and financial support.
- 26 acres in riparian areas were replanted with conifers.
- 5 acres were reseeded to native grasses to reduce the spread of noxious weeds.
- The project will result in improved flood plain function and decreased sediment delivery into the stream.

Phillips Creek before bridge was removed.

After-bridge and road was removed and vegetation was replanted and reseeded.

Subalpine Fir Management

A series of timber sales over 2,500 acres was designed to reduce fire risk near private homes in old, high-elevation subalpine forest that had many dead standing trees resulting from wildfire. Predicted fire behaviors showed that escaping wildfire from the bottomlands of the North Fork Umatilla wilderness would go into the rim area, where both dead and dying subalpine forest and private homes co-exist. The project provides a significant amount of timber while reducing the distribution of fuels. Unevenaged management prescriptions, through thinning and group selections, will help create a diversity of forest structures that is more typical of historic conditions in the Umatilla highland country. The project will protect recreation activities and summer homes that exist along the rim of wilderness. It will also protect an enclave of private land along the corridor of highway 204 between Elgin and Westin.

- Increase the amount of vegetation diversity.
- Provide 20 MMBF of timber and jobs which accompany the harvest.
- Use low-impact harvesters and forwarders.
- Pro-active protection of homes from wild land fire through removing high amounts of fuels.

Forest at risk of fire treated by salvage logging for fuel reduction, while also protecting homes and property.

Skookum Underburn

This 8800-acre prescribed fire will be completed in 1999 and is intended to restore Ponderosa Pine and mixed-conifer forests to their natural range of conditions in the Texas Butte roadless area. Using prescribed fire allows treatment without building roads or using expensive helicopter logging to extract low-value wood. This project tests the effectiveness of treating heavy fuels across large landscapes. Monitoring will reveal the effects of high intensity fires on water quality, plant succession in Grand Fir forest types, and the actual amount of fuels consumed. Prescribed fire is an important tool in aggressive forest health restoration strategies that seek to create sustainable, resilient forests.

- The subwatershed, in which the project is located, was identified by the Wall Watershed Ecosystem Analysis as the highest priority for treatment.

- Collaboration with the University of Idaho and the Forest Service's Seattle Fire Research Lab, both of which have designed monitoring protocols for soil heating and fuel consumption.

Mallory Commercial Thinning

Currently Ponderosa pine dominate the forest within the Mallory subwatershed. An analysis showed that the amount of late and old forest structure that was the historic condition no longer existed. Proactive thinning will create more open stands of large Ponderosa pine. In addition, valuable remnant stands of aspen will be restored to their original health by reducing the amount of encroaching conifers that easily outgrow and eventually cause he decline of aspen.

- Collaborated with ODFW to identify key wildlife travel corridors and wildlife habitat mitigation measures.
- The project "thins from below" 1,088 acres, yielding 4.2 MMBF of small diameter, green trees as byproducts.
- A post-harvest underburn will reduce the fuel load.
- Road closure and obliteration will enhance water quality and wildlife habitat.

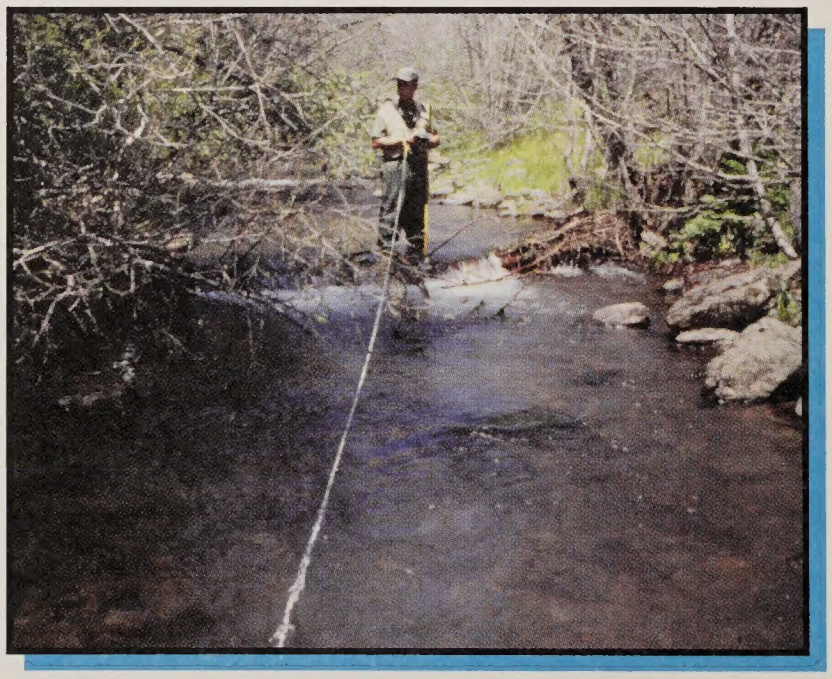
Wallowa Whitman National Forest

Upper Grande Ronde

The Upper Grande Ronde watershed encompasses approximately 250,000 acres. Building from a series of collaborative watershed-scale assessments, restoration projects in the Upper Grande Ronde are driven by goals to protect and enhance water quality, fish habitat, and watershed condition. Projects began in 1995 and will continue through 2001. Several projects were designed to return the watershed and its stream network back to a proper functioning condition.Treatments to restore habitat will help recover species, reduce summer water temperatures, and improve the function of wet meadows. Results will include increased water storage from spring runoff; longer retention of snowpack, which will help reduce flood flows thereby protecting channel conditions; and improved riparian area and watershed conditions for water quality and fish habitat. Project monitoring within the Upper Grande Ronde has been integrated with research - what is learned will be incorporated into future projects.

- Collaborators include: The Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, OSU, DEQ, Union Soil and Water Conservation District, ODF, NRCS, Grande Ronde Model Watershed Program, ODA, and private landowners and federal permittees.
- 7.0 MMBF of timber will be harvested.
- 1000 acres of pre-commercial thinning will be conducted to reduce fuel levels.
- 2757 acres of prescribed fire will take place.
- Obliterated 17 miles of road.
- Riparian Areas will be protected through construction of buffer zones.
- 180 acres of meadow will be restored.
- Construction of 15.0 miles of fencing to keep cattle out of sensitive vegetative areas.
- Implementation and effectiveness monitoring has begun.

Before- A hydraulic trackhoe is used to scoop out the river bottom, providing deep, cold pools essential for fish survival.

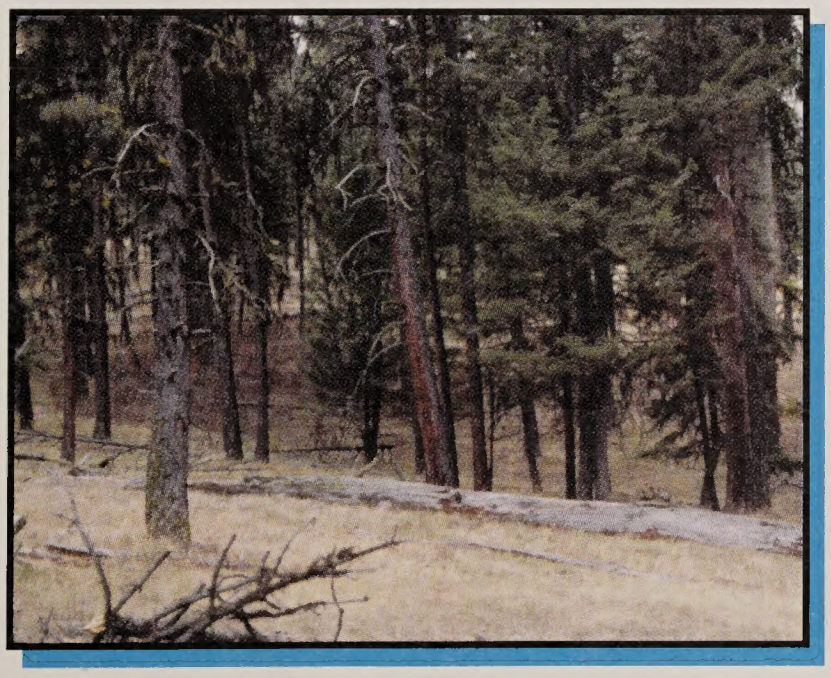


After- Monitoring of pre and post restoration activity.

Hungry Bob

Researchers from the Pacific Northwest Research Station were concerned about the effects of mechanical thinning and underburning on soil and water within the 23,200 acre Joseph watershed. Oregon State University is also conducting a study in the Hungry Bob Project Area, that is focused on the costs of using logging equipment specifically designed to handle small logs. The Hungry Bob project is part of a larger ongoing program on the Wallowa Valley Ranger District designed to bring existing vegetation conditions into balance with more historic conditions. Forests are currently much denser than they had been historically, and the mosaic vegetation pattern has shifted to a solid one, primarily due to the exclusion of fire. The project is expected to protect wildlife species that are dependent on a diverse range of vegetation, and to protect water quality.

- Collaborators include: Pacific Northwest Research station, Oregon State University, Wallowa County Natural Resources Advisory Committee, and the Wallowa County Watershed Committee.
- Harvested 957 acres of timber with average tree size 9".
- Produced 2.3 MMBF of sawtimber and 260 MMBF of non-sawtimber.
- 7,931 acres of planned underburn acres decreasing the risk of wildfire.
- 25.6 miles of roads are scheduled for closing upon completion of activities.



Before proactive understory thinning to protect wildlife and water quality from lethal wildfire.

After thinning research partners will monitor the effects of restoration activities and cost effectiveness.

Minam II Prescribed Fire

The Minam II project exemplifies adaptive management in action for 50,000 acres in the Eagle Cap Wilderness. This project resulted from two earlier projects that dealt with wilderness resource protection and wildland fire management. It was designed to protect both the natural processes of wilderness and the homes and lives of private land inholders. The planning analysis pointed out the need to protect private lands from wildfire exiting the wilderness onto private inholdings. The Minam River is habitat for salmon, steelhead, and bulltrout species. The objectives are to use prescribed fire on an estimated 25,000 acres to safely allow the return of wildland fire into wilderness.

- Endangered fish habitat improved.
- Private land inholders are at less risk from catastrophic fire.
- Met with the intent of the Wilderness Act by creating conditions where wildland fire can be allowed.

Washington Project

Ecosystems in the Blue Mountains were historically maintained in a sustainable and resilient condition by frequent, low intensity ground fires on some sites, and less frequent, but more intense fires on others. The exclusion of fire has caused the forests to shift from open, park-like stands of ponderosa pine and larch to multi-layered stands dominated by true firs and Douglas-fir. Overcrowded forest conditions have created tree stress and allowed insects to serve as a natural thinning agent, causing extensive tree mortality that has created dangerous fuel conditions. The Washington Project encompasses a critical urban-wildland interface, a 4,000 acre buffer which lies between the Baker City Municipal Watershed and the developed areas in Baker Valley. At risk is the ability of the Baker City Watershed to continue delivering clean, safe drinking water to 10,000 residents if a destructive wildfire could not be contained or controlled from spreading into the Baker City Watershed up from the valley below. Reducing hazardous fuels, thinning overstocked stands, closing and obliterating unneeded and poorly-located roads will help restore watershed health and will provide for long-term visual quality.

- Pre-commercial thinning will be conducted on 245 acres.
- 3.8 million board feet of commercial timber will be made available.
- Fuel reduction will be achieved by burning on 1,291 acres.
- Will reconstruct 6.1 miles of roads.
- 84.5 miles of road will be obliterated.
- 5.98 miles of road will be closed.

Before- The exclusion of fire created multi-layered forest stands.

After- Post treatment understory thinning helped restore the health of the watershed.

Winema National Forest

Spencer Creek Watershed

Spencer Creek, a tributary to the Klamath River, provides important habitat for redband trout. Land ownership in the 54,200 acre Spencer Creek watershed is 56% federal (US Forest Service and Bureau of Land Management), 32% US Timberlands, and 12% private. Several projects were designed to return or restore the watershed and its stream network back into a correctly functioning condition. Treatments to restore habitat include: boulder and log placement within the Spencer Creek channel; livestock exclosure fencing; development of off-channel livestock water sources; road closures and obliteration; reseeding; culvert removal; and pasture rotation. The project treatments are intended to reduce sediment in the stream, set up alternate water sources for livestock grazing, provide shade, and contribute large wood for future stream complexity.

- Collaborators include: Oregon Department of Fish and Wildlife, Soil and Conservation Service, OSU Extension Service, Soil and Water Conservation District, Pacific Power and Light, Charley Livestock Company, off-road enthusiasts, various fishing groups, and local school volunteer groups.

- Approximately 5 miles and 79 acres of riparian fencing on Forest Service lands over the past decade.

- 32 miles of road will be closed or obliterated, including 26 creek crossings removed.

- Approximately 20 miles of US Timberland roads closed.

- On private property, 7 miles of fence has been built to accommodate a 6 pasture rotation system.

Lone Pine Access and Travel Management

The 1998 Lone Pine Access and Travel Management established objectives to close or obliterate roads that were no longer needed for access, or that have detrimental effects on riparian areas or archeological sites. A trust responsibility with the Klamath Tribes was met by protecting big game animals and increasing habitat use. The project addresses the lingering effects from Lone Pine and Quick Fires, which burned 27,000 acres. The large density of roads, exceeding 4 miles per square mile, was affecting water quality and quantity. The effects of restoration actions on hydrological function, wildlife use, and breaching of road closures or obliteration will continue to be monitored. Approximately 95% of the work has been completed and the remainder will be finished in the summer of 1999.

- 220 miles of road were closed or obliterated.
- Reduced sediment movement and improved water quality.
- Maintained a travel network that met the needs of local citizens and communities in the area.

BLM Lakeview District

Bear Valley Bald Eagle Habitat Enhancement

The Bear Valley Wildlife Refuge was established to preserve forests used by a large number of bald eagles for winter roosting. Largely as a result of an emphasis on fire suppression in the past, the forested stands of Douglas fir, Ponderosa pine, Incense cedar and White fir are overstocked. The development of fuels in the understory has created a ladder to the crowns of overstory trees increasing their vulnerability to stand-replacing wild fire and threatening the habitat of bald eagles.

The US Fish and Wildlife Service (USFWS) manages the Refuge, and has requested the assistance of the BLM in thinning approximately 245 acres in both roosting and non-roosting areas. Pre-commercial and commercial thinnings are designed to improve and maintain existing roosting trees, reduce stem density, and reduce fuel loads and ladder fuels to allow for follow-up underburns to maintain the reduced density.

- This project is a collaborative effort between USFWS and BLM to share personnel, equipment, and expenses. Others include: Weyerhauser, ODFW, OSU, and Pacific Northwest Research Station (US Forest Service).
- 1 MMBF of timber will be harvested.
- Submerchantable material 3-7 inches in diameter will be removed and chipped off-site to reduce fuel loading.
- Value of timber offered was sufficient to pay for treatment.
- Underburns will be conducted after thinnings in appropriate locations.
- A Culvert and bridge were replaced.
- Project was designed to benefit local tourism by enhancing winter flying of eagles out from the roosting area.

Bald Eagle protected for winter roosting.

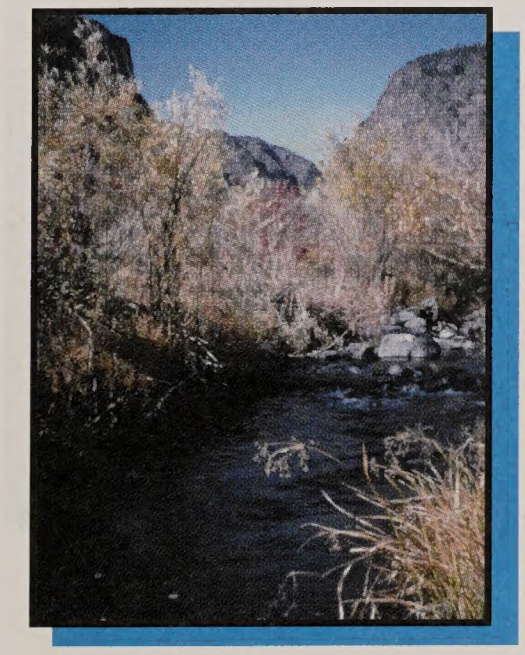
Roost tree after treatment.

BLM Burns District

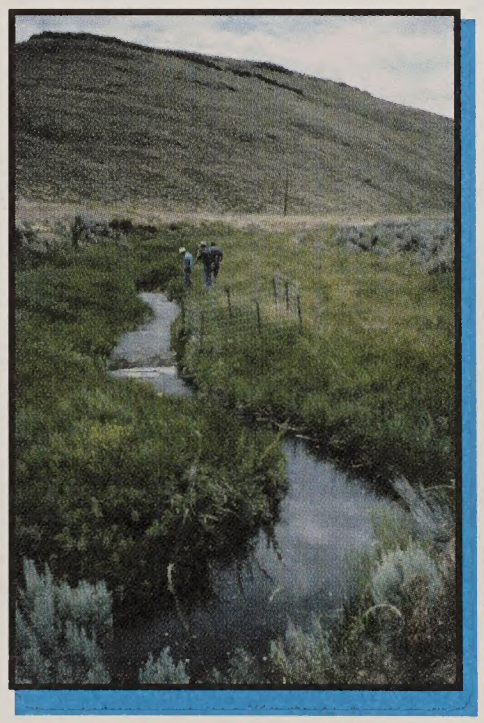
Home Creek Canyon
Riparian recovery in Skull Creek from changed livestock management.

The BLM, USFWS, ODFW, Malheur National Wildlife Refuge (MNWR), and Roaring Springs Ranch entered into a voluntary Conservation Agreement to manage Catlow Valley streams which contain the Catlow redband trout and Catlow tui chub. Both species are considered BLM sensitive and an Oregon Species at Risk. The Catlow redband trout is a USFWS candidate for listing under the ESA. The Catlow tui chub is a USFWS Species of Concern.The Conservation Agreement was developed as a pre-listing recovery program. The treatments are designed to eliminate threats to the fish species, expand their distribution; improve riparian areas, water quality, and in stream habitat conditions; improve upland conditions. Involving over 147,000 acres of three watersheds, with 43 percent BLM and almost the entire remaining 57 percent Roaring Springs Ranch, the management for the conservation of the species takes a cooperative, landscape approach that looks beyond ownership boundaries.

- Collaborators include: Oregon State University, the National Fish and Wildlife Foundation, ODEQ, EPA, and interested citizens.
- Reintroduction of fire will occur through a 15 year prescribed fire program, in coordination and cooperation with Roaring Springs Ranch, to restore upland vegetative condition and will affect approximately 70 percent of the watersheds.
- Integrated Weed Management strategy is in place.
- Conduced road improvement, road removal, old fencing removal, new pasture fencing construction, reservoir improvement, fish passage enhancement with innovative weir, off-channel water source enhancement as part of broader strategy to improve grazing management practices.
- Incorporated use of BLM, MNWR, and Roaring Springs Ranch pastures outside of the watersheds.



Little Whitehorse Creek when livestock grazing occurred season-long. Riparian vegetation was scarce, impacting aquatic conditions.



After livestock management changes where implemented, riparian vegetation increased, water flow, quality and aquatic conditions improved.

BLM Vale District

Trout Creek Mountain Riparian Project

The Trout Creek Mountain Riparian Project was initiated in 1988 in the Trout Creek/Oregon Canyon Mountains in an area encompassing 500,000 acres of BLM rangeland. That year a working group was formed to help resolve conflicts over livestock grazing which resulted from more than 100 years of season-long grazing and severe deterioration of riparian resources. Alternative livestock grazing strategies were developed which included reducing the season of use, a shift to early season use, a reduction in Animal Unit Months (AUMs), construction of management fences and development of alternative water sources away from riparian areas.

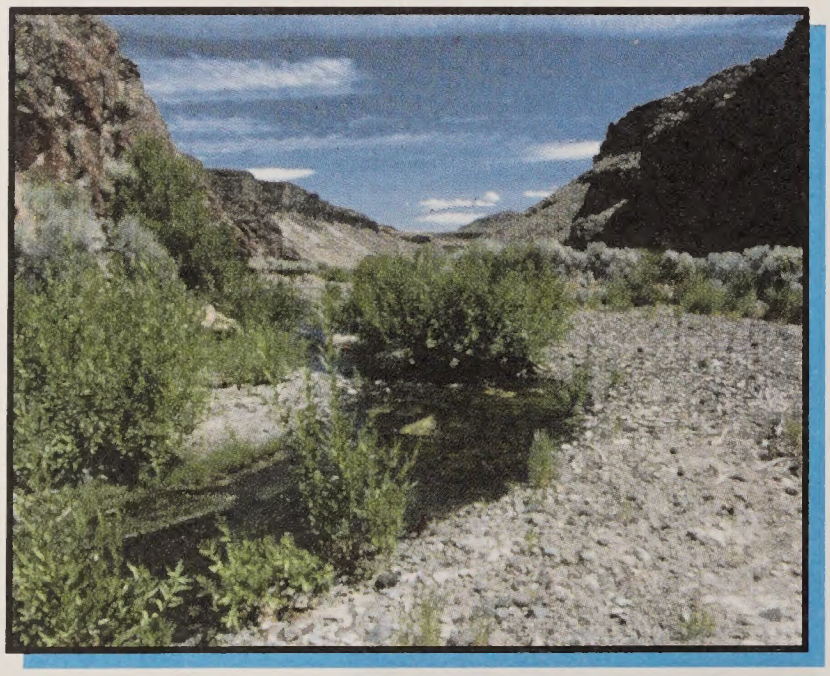
- The Trout Creek Mountain Working Group is a collaboration of environmental groups, ranchers, interested publics, FWS, BLM and ODFW. Governor's Watershed Enhancement Board has participated in the project by funding riparian improvement projects.

- Change in grazing strategies proved to be effective in restoring riparian areas. Riparian conditions, such as vegetation cover, bank stability, or channel sinuosity, improved on 75 miles of streams after implementation of early season grazing.

- Pipelines were constructed to provide off-stream watering sites and fences built to implement restoration grazing systems in riparian pastures.

- Upland vegetation showed significant improvement.

- A substantial increase in Lahontan cutthroat trout populations has occurred in streams of the project area.



Grazing strategies improved riparian vegetation.

Increase in fish populations.

BLM Prineville District

South Boundary Forest Management

The South Boundary project area has experienced a buildup of fuels, an increase in disease levels, and a decline in hardwoods. Project goals are to: support the maintenance and development of large trees, with an emphasis on maintaining and promoting a single layer canopy of early successional, fire-tolerant Ponderosa pine; reduce of fuel levels to lower wildfire risk; enhancing hardwoods, primarily aspen and Mountain mahogany and reduce the competition from encroaching conifers; reduce open road density to improve watershed and overall ecological values. Treatments include commercial and pre-commercial thinning; prescribed burning; conifer removal and fencing of hardwood stands; road obliteration and a seasonal road closure.

- The project is located within the North Fork Crooked River Watershed, and includes portions of the North Fork Crooked National Wild and Scenic River, North Fork Wilderness Study Area, Ochoco National Forest and private lands.
- Collaborators include: ODFW (cost sharing), adjacent landowners, hunter groups, and timber industry representatives.
- 1 MMBF of timber will be harvested through thinning.
- 4,400 acres of prescribed burning will take place.
- Air quality as it is affected by prescribed burning needs to be more thoroughly addressed. Additional education will be needed for public acceptance of short term air quality effects generated by burning. This will be essential in order to significantly increase our prescribed burning activities.
- Road obliteration will occur for roads no longer needed for future management, and seasonal road closures will be implemented. Access would be maintained for Native American root gathering, as well as for public and management needs.
- Aquatic and riparian conditions will be improved by protection of riparian areas through fencing, riparian hardwood management, and reduction of road density.

Woody fuels and thick layer of organic matter on forest floor are visible before prescribed burning.

View of the same area after prescribed burning illustrates the reduction in woody fuels.

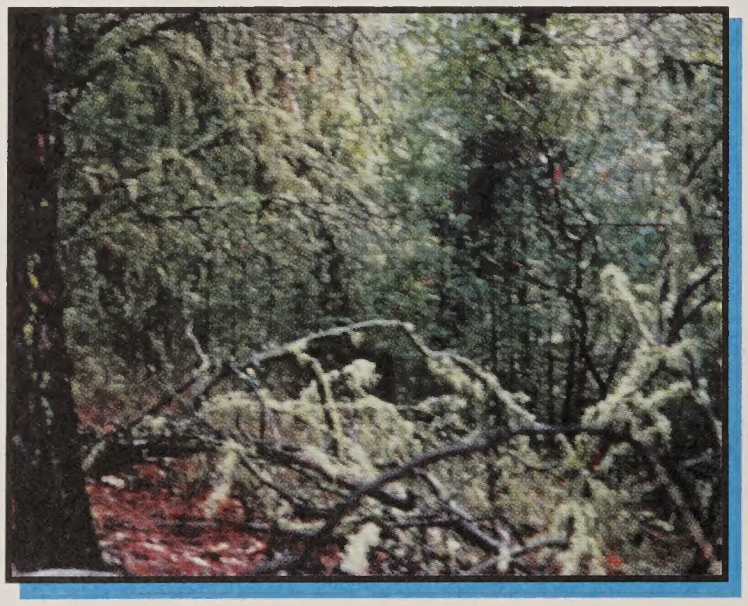
BLM Medford District

Buncom Landscape Project

The Buncom Landscape Project will restore the Sterling Creek Watershed by implementing Vegetation Management Projects and contributing to the local economy. Lack of fire in the forest ecosystem has changed the forest structure, composition, and density. Fire suppression has prevented the majority of low to moderate severity fires, and has allowed heavy fuel accumulations across the landscape. Without Vegetation Management, the probability of a major, stand-replacement fire increases annually.

The Buncom project is located within the Applegate Adaptive Management Area. Community involvement in the development of the project is multi-layered and on-going. Treatments to restore forest health include: density reduction of trees and shrubs by thinning and reintroducing fire into the ecosystem; protection and restoration of special habitats and areas designated important for connectivity, including riparian and late-successional habitat; moving forested landscapes toward dominance by larger, older trees; and promoting the restoration of shade intolerant species such as ponderosa pine.

- Collaborators include: The Applegate Partnership, Applegate River Watershed Council, Headwaters (a local environmental group), and an organized neighborhood group.
- Approximately 95,000 trees, with an average diameter of 13 inches at breast height, yielded more the 18 million board feet, and provided jobs for numerous local contractors.
- Small diameter trees were thinned to reduce the effects of years of fire suppression, thus improving general forest health. Oak woodlands and shrub lands were thinned to levels that will better sustain these stands through anticipated wildfire events and improve their ability to support native wildlife species.
- Hand-piling and burning, underburning and broadcast burning of non-forested areas were integrated.
- Road improvements, minimal new road construction, road closures, road decommissioning and road obliteration were all incorporated using low impact and cost-effective equipment.



Before density understory reduction.

After density understory reduction.

State of Oregon Sun Pass State Forest

Roundhouse Timber Sale

Many forest stands in the Sun Pass State Forest are overly dense due to 70 years of fire exclusion and selective harvesting. This commercial timber sale, and post-sale treatment, was designed to thin the forest and reduce the amount of encroaching fire intolerant species. The Sun Pass State Forest aims to restore forest health while simultaneously meeting the state trust responsibility to provide income via timber receipts to the county in which the forest is located.

- Collaborators include: ODF, Klamath Tribe, and the Concerned Friends of the Winema.
- The sale generated 5.2 MMBF of timber and $1.3 million to Klamath County.
- Timber harvested in all age classes down to 5" DBH. The sale was designed to favor fire-dependent species, such as ponderosa pine, while reducing the amount of white fir.
- Timber under 5" DBH were thinned post-harvest. Much of the smaller material was chipped and removed, the rest was scattered primarily on the skid trails.
- Newly constructed and unnecessary roads were obliterated.
- The project identified and excluded the remains of a historic logging camp.

Before thinning activities.

After thin; reduced amount of encroaching fire intolerant species.

Deschutes National Forest

Demo Butte Timber Sale

The timber sale has been completed and is now closed. The post-sale work that remains to be accomplished includes: fuels burning in the fall of 1998 and spring of 1999; thinning and piling of slash; and subsoiling in about two years. Funding the for the post-sale work has been established.

Red Plague and Landing Timber Sales

The timber sale is 30 percent completed will be finished by June 2000. None of the post sale work has been started, and KV funding is adequate.

Black Butte Fuels Reduction

This is the second year that the fuels reduction program has been in operation and about 10 percent has been completed. Some of the prescribed fire and mechanical mowing has been completed. There is a concern about whether the funding for thinning will be adequate.

Big Marsh Wetlands Restoration

Wetlands restoration is 90 percent completed and monitoring is currently being done. Expanding the project to include some additional channel restoration in 1999 is being considered.

Katalo East

None of the timber sale work has been completed at this time. All precommercial thinning is completed or currently under contract. The first year of prescribed burning is scheduled for fall 1998. The first year of mechanical mowing began the spring of 1998 and 300 acres were treated.

Fremont National Forest

Upper Thomas Creek Ecosystem Management Project

The high number of roads in this watershed was a major concern. Three timber sales were planned to encompass many of the roads of concern within the timber sale boundaries, as well as to address forest health issues. The first phase was a salvage sale which received no bids, and so adjustments were made to make the sale more economical. The other two phases, which are green sales, have been combined into one sale which will be offered in 1999. The single purchaser within the Sustained Yield Unit has been on the ground with both Paisley and Lakeview, looking at similar restoration sales and their logging design. The sales will be used as an opportunity to close and rehabilitate roads within sale boundaries.

Thomas Creek Landslide Project

This project has been completed.

Malheur National Forest

Prescribed Fire Underburning

This underburning project, which is designed to increase the forest's ability to withstand wildfire, is part of a long-term prescribed fire program.

Badger Planning Area

Badger Timber Sale has been sold, but is currently under litigation. None of the projects can move forward until the litigation is resolved and the sale has been completed. This project was developed to restore aspen stands by removing conifer competition and fencing the aspen clones. The Badger Timber Sale has a court decision and the sale was awarded September 22, 1998. The purchaser has begun work.

Doverspike Range Allotment

This project, which uses a solar-powered pump to provide water for cattle away from sensitive riparian areas, is ongoing. The projects effectiveness will continue to be monitored by the forest.

Mt. Hood National Forest

Three Conifer Forest Health Salvage

The 1996 purchaser for this sale filed for bankruptcy when the sales were about 20 percent completed. The new purchasers have time frames that are extended through 1999 and 2000, so this salvage will be ongoing. With the exception of identified road rehabilitation, all the restoration projects will be completed with the completion of the timber sale. One of the goals is to reduce road mileage within the area. Some reductions will occurr as units are closed. Other road treatments will occur utilizing KV dollars and erosion road funding. All treatments have received funding at this time.

Ochoco National Forest

Mill Creek Wilderness Prescribed Fire

This prescribed fire project is planned for completion in the fall of 1999. A Watershed Analysis has been completed, with the Environmental Assessment including a public meeting.

Williams Prairie Restoration

All restoration projects have been funded and will be completed by the end of 1999.

Trout Creek Timber Sales

These sales have been awarded and are currently active. The associated projects have received funding. Four of the five timber sales have been awarded with some harvest activity. One timber sale received no bids. Work completed includes the construction of three fish barriers, culverts have been replaced or removed, 4.7 miles of riparian planing, two miles of head cut repair, 400 acres of prescribed fire, 1000 acres of precommercial thinning, 15 miles of road closures and monitoring of projects.

Snow Mountain District Noncommercial Thinning

The thinning contract has been awarded. Funding has been allocated for this project.

Silver Creek Natural Fuels Underburn

This underburn was planned as a spring activity. Because of the wet spring, there was no burning window for this project. It was completed in the fall of 1998.

Willow Creek Riparian Enhancement

This project is currently 30% completed and will be finished by the end of the year. Funding sources for this project were uncertain for a time, but that has been successfully resolved.

Umatilla National Forest

North Fork John Day Wild and Scenic River Restoration Project

This restoration of old mining damage has been completed for the river itself, and is being continued along the tributaries. The next phase will begin this fall (1998).

Wallowa-Whitman National Forest

Wapiti Ecosystem Management Project

This management project is composed of several smaller projects. Currently about 30% of the thinning has been accomplished yielding 1.9 MMBF of product. Three fourths of the planned prescribed burning has been accomplished. Road closures are scheduled to be completed after the sale closes. Stream restoration projects are ongoing. There are plans for additional placement of woody debris into 4 miles of tributaries of Elk Creek and Little Elk Creek. Another 100 acres of riparian planting will occur. Some of the planned old-growth enhancement was accomplished with the prescribed fire program, more is planned for implementation in 1999. The thinning, burning and old growth enhancement have been funded by the timber sale.

Provincial Monitoring on Three Blue Mountain Forests - ongoing

This monitoring is ongoing on the three Blue Mountain Forests. In 1997, the Malheur, Umatilla, and Wallowa-Whitman National Forest's conducted joint field reviews of implementation activities that focused on water quality management practices and produced one Tri-Forest Plan Monitoring Report. In 1998, field reviews focused on the management-ignited prescribed fire program across all three forests. Review teams have visited Bear Valley, Burns, LaGrande, Baker, North Fork John Day, Walla Walla, and Pomeroy Ranger Districts to date. Reviews on Prairie City and Long Creek Districts are scheduled for September. The three Blue Mountain Forests continue to standarize monitoring items and plan to continue to produce one Forest Plan Monitoring Report that covers all three forests.

Noxious Weed Management in Hell's Canyon National Recreation Area

This collaborative project to identify noxious weed infestations has been completed. 1,100 acres within the HCRNA were inventoried and treated. This was a collaborative effort with the Sierra Club, Tri-County Weed Board, and the Forest Service. Other project needs have been planned as a result of the inventories. These needs include continued detection and treatment of noxious weeds using ground-based methods analyzed under an initial programmatic Environmental Assessment (EA) for noxious weeds. It also includes an Environmental Impact Statement (EIS) that is underway to include aerial treatment as a viable method for fourteen sites on four districts across two forests. These particular sites are difficult to access and unsafe to treat with ground-based methods. Yellow star thistle is the predominant noxious weed being targeted for treatment. The EIS Team put out a draft in March 1998, and Record of Decision in June 1998. Implementation will begin in the summer of 1999.

Bark Beetle Salvage - Oregon Trail Interpretive Park

The Oregon Trail Interpretive Park bark beetle project is an on-going effort. The salvage of beetle infested trees and the placement of anti-aggregate pheromone to disrupt bark beetle mating and poulation growth has been completed. Precommercial thinning has been implemented inside and adjacent to the park. An additional 80 acres of thinning in small diameter, overstocked stands immediately adjacent to the OTIP was accomplished in 1998. Monitoring for increases in beetle activity is ongoing and additional thinning to increase the vigor of remaining trees is being planned to reduce susceptibility to future attacks. Funding has been directed through timber sales and insect and disease prevention money.

Winema National Forest

Desert Old-growth Management Area Projects

Much of this project has been completed. The remaining thinning will be accomplished in conjunction with the Antelope Pilot Project. The remaining stream rehabilitation will be completed this year when road repair is done using ten percent of the available funds. Underburning has been ongoing and will follow the thinning projects. Funding will be

dependent upon appropriated funds, and timing will be dependent upon the completion of the Antelope Pilot Project. Approximately 1000 acres per year have been done in the past years. An interpretive site has been finished, but active interpretation is continuing. Funding for interpretation is difficult to acquire, because it doesn't fit the recreational interpretation mold. A proposal for a grant to tie the newly created Volcanic Scenic Byway is being written. The district estimates that the cost of providing interpretative programs, including requests from the schools, would cost about $5000 per year.

Bugsy Salvage

This sale was completed in 1998. Approximately 100 acres of precommercial thinning will remain to be accomplished after the sale, but the exact amount will be determined with post-sale exams. No KV dollars were available for funding. Accomplishment will depend upon the availability of appropriated funding.

Stony Eagle/Bugsy Eagle Timber Sales

These sales and associated projects have been completed.

Antelope Pilot Project

This project, which is a stewardship contract, is focused on finding new markets for small material. The project will run for three years, 1998 through 2000. This year the stewardship contract will be awarded. There is a business plan completed for the project. Congress has been asked for the authority to trade goods for services in small diameter thinning as part of the development of new processes to deal with small diameter material. The project has been given funding.

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